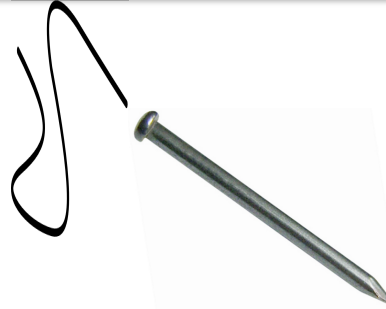


Building a Very Simple Electromagnet

Materials Needed:

- * Battery
- * Insulated wire
- * Nail or iron core

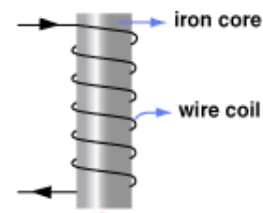
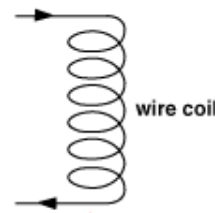


Background:

1. When electrons flow, they produce a magnetic field.



2. Coiling a wire focuses the magnetic field like a magnifying glass focuses light.



An iron nail is not a magnet. A wire is not a magnet. A battery is not a magnet. However, put the three together and voilà (pronounced vwä-'lä) a magnet.

Directions:

1. Wrap the wire neatly around the nail leaving enough wire sticking out of both ends to connect to the battery.
2. Test to see if it will pick up a paperclip or two.
3. Change the number of wraps of wire on the nail and see if it makes a difference.

